

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

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| Applicant's or agent's file reference WS 2252 PCT | FOR FURTHER ACTION See Form PCT/IPEA/416 | |
| International application No. PCT/EP2004/014785 | International filing date (Day/Month/Year) 29.12.2004 | Priority date (Day/Month/Year) 22.01.2004 |
| International Patent Classification (IPC) or national classification and IPC B65H67/08, B65H63/036 | | |
| Applicant SAURER GMBH & CO. KG et al. | | |

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|---|-------------------------------------|--|---------------------|--------------------------|------------|----------|--------------------------|-------------|---|--------------------------|------------|----------------------------|-------------------------------------|-----------|--|--------------------------|------------|-------------------------|--------------------------|-------------|--|--------------------------|--------------|---|
| 1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority according to Article 35 and transmitted to the Applicant according to Article 36. | | | | | | | | | | | | | | | | | | | | | | | | |
| 2. This REPORT consists of a total of 5 sheets, including this cover sheet. | | | | | | | | | | | | | | | | | | | | | | | | |
| 3. This report is also accompanied by ANNEXES, comprising a. <input checked="" type="checkbox"/> <i>(sent to the Applicant and to the International Bureau)</i> a total of 7 sheets, as follows: <input type="checkbox"/> sheets of the description, claims and/or drawing which have been amended and are the basis of this report and/or sheets containing rectifications authorised by this authority (see Rule 70.16 and Section 607 of the Administration instructions). <input type="checkbox"/> Sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the International Application as filed, as indicated in Item 4 of Box No. 1 and the supplemental box. b. <input type="checkbox"/> <i>(sent to the International Bureau only)</i> a total of (indicate type and number of electronic carrier(s), containing a sequence listing and/or tables related thereto, in electronic form only, as indicated in the supplemental box relating to the sequence listing (see Section 802 of the Administrative Instructions). | | | | | | | | | | | | | | | | | | | | | | | | |
| 4. This report contains indications relating to the following items: <table><tr><td><input checked="" type="checkbox"/></td><td>Box No. I</td><td>Basis of the report</td></tr><tr><td><input type="checkbox"/></td><td>Box No. II</td><td>Priority</td></tr><tr><td><input type="checkbox"/></td><td>Box No. III</td><td>Non-establishment of opinions with regard to novelty, inventive step and any industrial applicability</td></tr><tr><td><input type="checkbox"/></td><td>Box No. IV</td><td>Lack of unity of invention</td></tr><tr><td><input checked="" type="checkbox"/></td><td>Box No. V</td><td>Reasoned statement under Article 35(2) with regard to novelty, inventive step and industrial applicability; citations and explanations supporting such statement</td></tr><tr><td><input type="checkbox"/></td><td>Box No. VI</td><td>Certain documents cited</td></tr><tr><td><input type="checkbox"/></td><td>Box No. VII</td><td>Certain defects in the international application</td></tr><tr><td><input type="checkbox"/></td><td>Box No. VIII</td><td>Certain observations on the international application</td></tr></table> | <input checked="" type="checkbox"/> | Box No. I | Basis of the report | <input type="checkbox"/> | Box No. II | Priority | <input type="checkbox"/> | Box No. III | Non-establishment of opinions with regard to novelty, inventive step and any industrial applicability | <input type="checkbox"/> | Box No. IV | Lack of unity of invention | <input checked="" type="checkbox"/> | Box No. V | Reasoned statement under Article 35(2) with regard to novelty, inventive step and industrial applicability; citations and explanations supporting such statement | <input type="checkbox"/> | Box No. VI | Certain documents cited | <input type="checkbox"/> | Box No. VII | Certain defects in the international application | <input type="checkbox"/> | Box No. VIII | Certain observations on the international application |
| <input checked="" type="checkbox"/> | Box No. I | Basis of the report | | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> | Box No. II | Priority | | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> | Box No. III | Non-establishment of opinions with regard to novelty, inventive step and any industrial applicability | | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> | Box No. IV | Lack of unity of invention | | | | | | | | | | | | | | | | | | | | | | |
| <input checked="" type="checkbox"/> | Box No. V | Reasoned statement under Article 35(2) with regard to novelty, inventive step and industrial applicability; citations and explanations supporting such statement | | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> | Box No. VI | Certain documents cited | | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> | Box No. VII | Certain defects in the international application | | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> | Box No. VIII | Certain observations on the international application | | | | | | | | | | | | | | | | | | | | | | |

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| Date of submission of the request for preliminary examination 06.08.2005 | Date of completion of this report 11.10.2005 |
| Name and mailing address of the International Examining Authority: European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465 | Authorised officer Kising, A Tel. +49 89 2399 - 2174 EPO stamp |

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

AP20 Rec'd PCT/PTO 13 JUL 2006
International Application No. PCT/EP2004/014785

Box No. 1 Basis of the report

1. With regard to the **language**, this report is based on the International Application in the language in which it was filed, if nothing different is stated under this point.

- ☐ The report is based on a translation from the original language into the following language, which is the language of the translation, which has been filed for the following purpose:
 - ☐ international search (according to Rules 12.3 and 23.1b)
 - ☐ publication of the international application (according to Rule 12.4)
 - ☐ international preliminary examination (according to Rules 55.2 and/or 55.3)

2. With regard to the **elements*** of the international application, the report is based on *(replacement sheets which have been furnished to the receiving office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

Description, pages

1, 5-9 in the originally filed version
2-4, 4a, 4b received on 29.09.2005 with the letter dated 28.09.2005

Claims, No.

1-6 received on 29.09.2005 with the letter dated 28.09.2005

Drawings, sheets

1/3-3/3 in the originally filed version

☐ a sequence listing and/or any related tables – see supplemental box relating to sequence listing

3. ☐ The amendments have resulted in the cancellation of:

- ☐ Description: page
- ☐ Claims: No.
- ☐ Drawings: Sheet/Figs.
- ☐ Sequence listing (*specify*):
- ☐ any tables relating to the sequence protocol (*specify*):

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered in the opinion of the authority to go beyond the disclosure as originally filed, as indicated in the supplemental box (Rule 70.2 c)).

- ☐ Description: page
- ☐ Claims: No.
- ☐ Drawings: Sheet/Figs.
- ☐ Sequence listing (*specify*):
- ☐ any tables relating to the sequence listing (*specify*):

* If Item 4 applies, some or all of the sheets may be marked "superceded".

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International Application No.
PCT/EP2004/014785

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step and industrial applicability; documents and explanations supporting such statement

1. Statement
- | | |
|-------------------------------|-----------------|
| Novelty (N) | Yes: Claims 1-6 |
| | No: Claims |
| Inventive step (IS) | Yes: Claims 1-6 |
| | No: Claims |
| Industrial applicability (IA) | Yes: Claims 1-6 |
| | No: Claims |

2. Documents and explanations (Rule 70.7):

see supplementary sheet

**INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(SUPPLEMENTARY SHEET)**

International Application No. PCT/EP2004/014785

Item V

Reasoned statement according to Article 35(2) with regard to novelty, inventive step and industrial applicability; citations and explanations in support of such statement

Claim 1:

Document DE 1 276 523 B (D1), which is regarded as the closest prior art, discloses (see column 4, line 29 to column 5, line 7 and Fig. 1 to 4) a device for detecting a thread during the detection of thread ends in a suction pipe through which air flows, with a sensor device comprising a transmitter and a receiver, wherein a measuring field is formed between the transmitter and receiver and the suction pipe has a curvature in the region of the measuring field.

However, this document shows, unlike all further documents cited in the search report or in the description, in particular, that an elongate channel-like recess is formed on the smaller radius of curvature of the suction pipe, which is outwardly curved in the wall of the suction pipe and in that the thread tensioned in this recess crosses a measuring field, formed by a receiver and transmitter.

The advantage of this arrangement is that the thread runs undisturbed in the channel and is detected by the measuring field.

In D1, the pipe has an elongate opening on its inside, through which the thread exits and is detected by a measuring field.

DE 2 163 210 A discloses only two opposing sensors at the radii of curvature.

DE 43 08 058 A discloses a measuring field at the smaller radius of curvature, but without a channel-like configuration of the pipe at this point.

As a result, the subject of claim 1 should meet the requirements of Article 33(2) and 33(3) PCT.

**INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(SUPPLEMENTARY SHEET)**

International Application No. PCT/EP2004/014785

Claims 2 to 6:

The dependent claims 2 to 6 only relate to particular configurations of the invention, which also meet the above-mentioned criteria on the basis of the above-mentioned independent claim 1.

As the subject of the invention is also producible and industrially applicable, it also meets the requirements of Article 33(4) PCT.